

Claims

- [c1] 1. A circuit breaker comprising:
- a molded case;
 - a strap terminal extending from said molded case;
 - a terminal connector attached to said strap terminal, said terminal connector projecting outwardly from said circuit breaker molded case; and
 - an insulator discrete from said molded case disposed around said terminal connector, said insulator trapped into said circuit breaker molded case by attachment of said terminal connector to said strap terminal, said insulator being configured to be used with a plurality of different field installable terminal connectors.
- [c2] 2. The molded case circuit breaker defined in claim 1 wherein said insulator comprises a substantially C-shaped member having a bottom wall disposed under said terminal connector, said C-shaped member defined by a back wall for disposal against said molded case, and sidewalls connected with said bottom wall and said back wall extending along opposite sides of said terminal connector, a snap-fit feature extending from at least one of each side wall and said bottom wall, each said snap-

fit feature configured for snap-fit engagement with said molded case having a complementary snap-fit feature for snap-fit engagement therebetween.

[c3] 3.The molded case circuit breaker defined in claim 2 wherein said insulator is configured to receivably retain a lug in a cavity defined by said C-shaped member.

[c4] 4.The molded case circuit breaker defined in claim 2 wherein said bottom wall includes a cavity configured to retain a threaded nut therein, said strap terminal is electrically connected to said terminal connector via a terminal screw extending through said terminal connector and said strap terminal threadably engaged with said threaded nut.

[c5] 5.The molded case circuit breaker defined in claim 4 wherein said bottom wall includes an aperture configured therein to allow said terminal screw to extend therethrough.

[c6] 6.The molded case circuit breaker defined in claim 5 wherein said aperture is defined by a cylinder extending from said bottom wall, said cylinder insulating said terminal screw extending therethrough.

[c7] 7.The molded case circuit breaker defined in claim 1 wherein said terminal connector is one of:

a lug;
a ring terminal;
a U terminal;
a saddle clamp; and
a bus bar.

[c8] 8.The molded case circuit breaker defined in claim 1 further comprising:

a gasket disposed over said strap terminal and intermediate said molded case and said insulator.

[c9] 9.The molded case circuit breaker defined in claim 1 wherein said back wall includes a slot configured to receive said strap terminal therethrough.

[c10] 10.The molded case circuit breaker defined in claim 1 wherein said sidewalls, said back wall and a side opposite said back wall confine said terminal connector, said confinement limiting movement of said insulator relative to said terminal connector.

[c11] 11. The molded case circuit breaker defined in claim 1 wherein a side opposite said back wall is substantially open and configured to receive an external conductor therethrough.

[c12] 12.The molded case circuit breaker defined in claim 11 wherein said external conductor includes one of:

a bus bar,
a wire conductor;
a U-terminal; and
a ring terminal.

- [c13] 13.The molded case circuit breaker defined in claim 3 wherein said lug is slidably inserted into said insulator toward said bottom wall until terminal connector abuts one of said bottom wall and said strap terminal prior to threadably securing said terminal connector to said strap terminal.
- [c14] 14.The molded case circuit breaker defined in claim 1 wherein said strap terminal is one of a line strap terminal and a load strap terminal.
- [c15] 15.The molded case circuit breaker defined in claim 1 having one or more poles.
- [c16] 16.A circuit breaker comprising in combination:
a molded plastic circuit breaker case;
means within said case interrupting circuit current upon occurrence of an overcurrent condition through an associated electric circuit;
line straps extending from line slots formed within a line end of said case adapted for connection with said electric circuit;

load straps extending from load slots formed within a load end of said case adapted for connection with a load; terminal connectors attached to said load and line straps, said terminal connectors projecting outwardly from said circuit breaker molded case, said terminal connectors adapted for connection with one of said electrical circuit and said load; and a cover arranged over said line or said load straps electrically-isolating said line or load straps, said cover discrete from said molded case disposed around said terminal connector, said cover trapped into said circuit breaker molded case by attachment of said terminal connector to a respective strap, said cover being configured to be used with a plurality of different field installable terminal connectors.

[c17] 17.The circuit breaker of claim 16 further comprising: a gasket disposed over each said respective strap and intermediate said molded case and said cover.

[c18] 18.The circuit breaker of claim 17 wherein said cover comprises a substantially C-shaped member having a bottom wall disposed under said terminal connector, said C-shaped member defined by a back wall for disposal against said gasket, and sidewalls connected with said bottom wall and said back wall extending along opposite sides of said terminal connector, a snap-fit fea-

ture extending from at least one of each side wall and said bottom wall, each said snap-fit feature configured for snap-fit engagement with said molded case having a complementary snap-fit feature for snap-fit engagement therebetween.

[c19] 19.The circuit breaker of claim 18 wherein said cover is configured to receivably retain a lug in a cavity defined by said C-shaped member.

[c20] 20.The molded case circuit breaker of claim 19 wherein said bottom wall includes a cavity configured to retain a threaded nut therein, said strap terminal is electrically connected to said terminal connector via a terminal screw extending through said terminal connector and said strap terminal threadably engaged with said threaded nut.

[c21] 21.The circuit breaker of claim 16 wherein said terminal connector is one of:
a lug;
a ring terminal;
a U terminal;
a saddle clamp; and
a bus bar.

[c22] 22.A molded insulator cover for a circuit breaker molded

case comprising:

a terminal connector attachable to the strap terminal, said terminal connector projecting outwardly from the circuit breaker molded case; and

an insulator discrete from the molded case disposed around said terminal connector, said insulator trapped into said circuit breaker molded case by attachment of said terminal connector to said strap terminal, said insulator being configured to be used with a plurality of different field installable terminal connectors.

[c23] 23.The molded insulator cover of claim 22 further comprising:

a gasket disposed over each said respective strap and intermediate said molded case and said cover.

[c24] 24.The molded insulator cover of claim 23 wherein said cover comprises a substantially C-shaped member having a bottom wall disposed under said terminal connector, said C-shaped member defined by a back wall for disposal against said gasket, and sidewalls connected with said bottom wall and said back wall extending along opposite sides of said terminal connector, a snap-fit feature extending from at least one of each side wall and said bottom wall, each said snap-fit feature configured for snap-fit engagement with said molded case having a complementary snap-fit feature for snap-fit engagement

therebetween.

[c25] 25.The molded insulator cover of claim 24 wherein said cover is configured to receivably retain a lug in a cavity defined by said C-shaped member.

[c26] 26.The molded insulator cover of claim 25 wherein said bottom wall includes a cavity configured to retain a threaded nut therein, said strap terminal is electrically connected to said terminal connector via a terminal screw extending through said terminal connector and said strap terminal threadably engaged with said threaded nut.